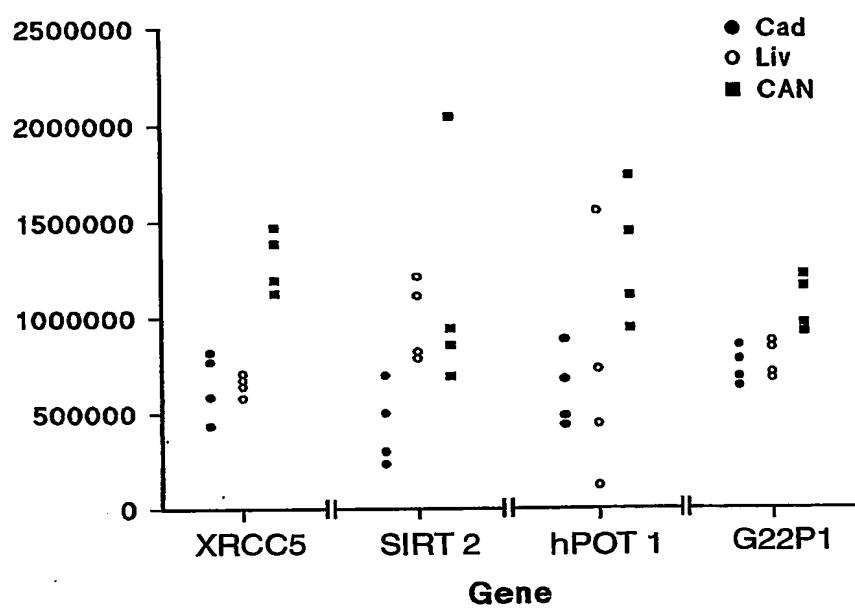


Figure 1



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Figure 2

Analysis of Variance

Variate: SQRTsig

Source of variation	d.f	s.s	m.s	v.r	F pr.
Sample stratum					
Kidney type	2	191398	95699	11.92	0.003
Residual	9	72228	8025	2.09	

5 Samples. *Units* stratum

Genes	3	3240289	1080096	281.32	<.001
KidType	6	59590	9932	2.59	0.041
Genes					
Residual	27	103664	3839		
Total	47	3667169			

Tables of means

Variate: SQRTsig

Grand mean 505.3

Kidney type	Cadav	Live	Reject
	436.5	490.6	589.0

10

Genes	Gene1	Gene2	Gene3	Gene4
	924.3	35.1	506.9	240.1

KidType	Gene1	Gene2	Gene3	Gene4
Cadav	864.6	306.4	366.2	208.7
Live	882.5	308.0	563.6	208.2
Reject	026.0	435.8	590.8	303.5

Standard errors of differences of means

Table	KidType	Genes	KidType
	Genes		
Rep.	16	12	4
s.e.d.	31.67	25.3	49.43
d.f.	9	27	31.64

The comparisons where there are significant differences (at $p<0.05$), are reject > live & live = cadav for gene1

5 Reject > live & live = cadav for gene2

Reject = live & live > cadav for gene3 and reject = live & live = cadav for gene4

Tables of means

10 Variate: Signal

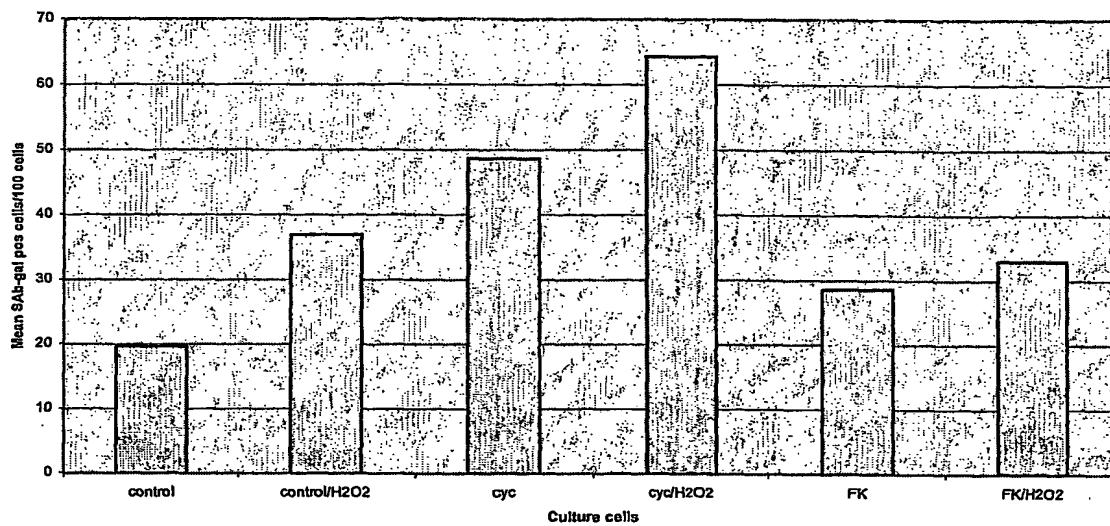
Grand mean 331772

KidType	Cadav	Live	Reject
2	57252	311656	426409

Genes	Gene1	Gene2	Gene3	Gene4
	861825	126857	275505	62901
KidType				
Cadav	749194	95149	140235	44428
Live	780627	94960	320138	50898
Reject	1055656	190461	366141	93378

Fig 3

SA beta-Gal staining in tub epi cells



5

SA β Gal staining at pH6 in primary tubular epithelial cultures as a measure of senescence .

Figure 4. (see Appendix 1) Stress responses.

Cellular responses to oxidative damage indicate a linkage between energy production, fuel utilisation and cell cycle control. They show an integrated response involving sensing 5 DNA damage (genomic and mitochondrial) that results in telomere destabilisation and either cellular senescence or apoptosis, dependent upon the level damage.

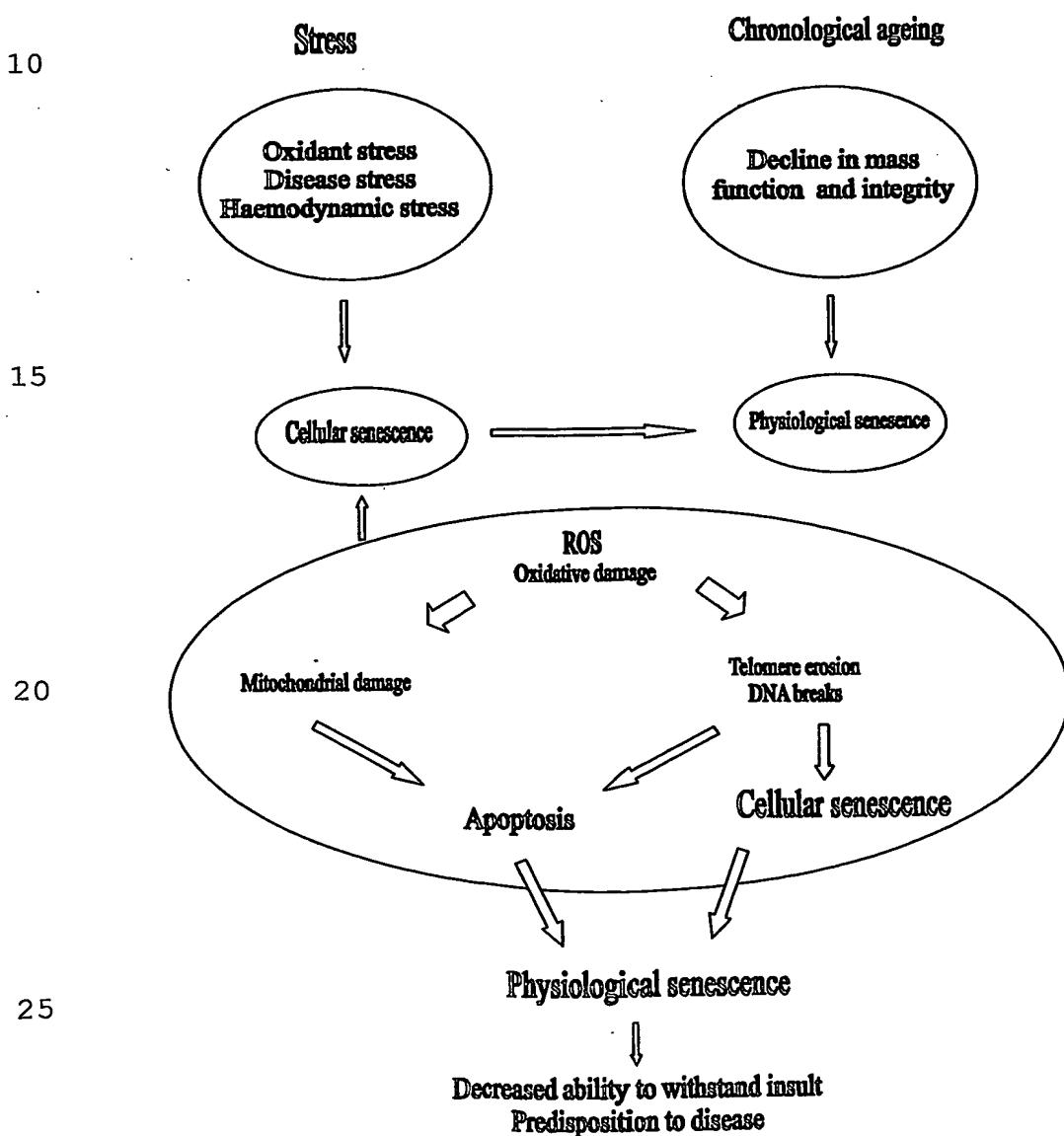


Figure 5 (see Appendix 3)

Paths to senescence

5

Cellular stresses can lead to cell loss through apoptosis or carriage of the damage as wear and tear. Both processes will accelerate physiological senescence. Damage carried as wear and tear will lead to accelerated cellular senescence and lead to pro inflammatory changes in the graft. These overlapping processes will weaken transplants so as to predispose them to disease when subject to further stress (e.g. immune injury, hypertension).

15

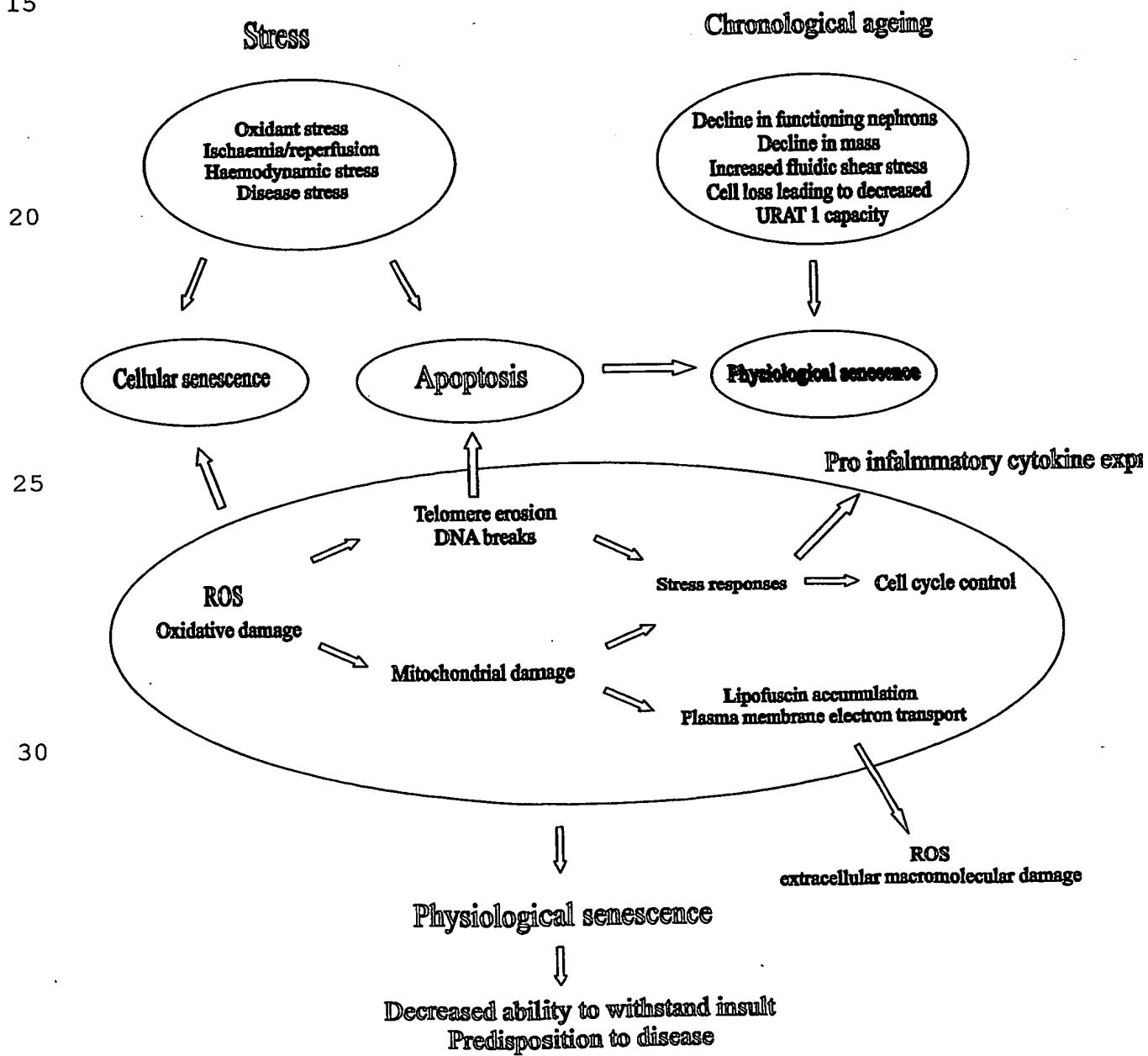


Figure 6 (see Appendix 4)

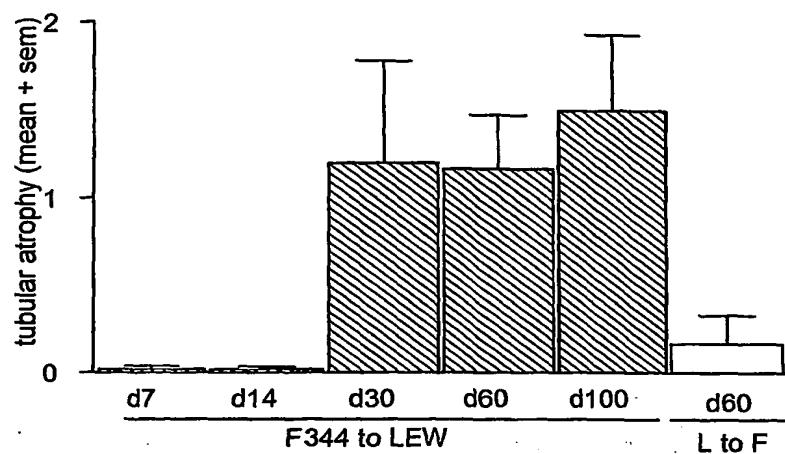
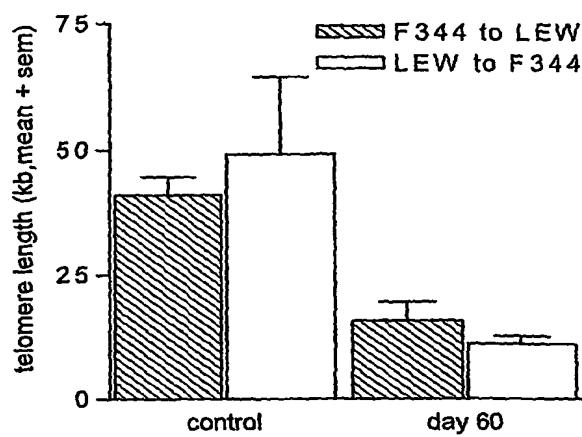
SA Joosten *et al*

Figure 7 (see Appendix 4)

SA Joosten et al

A



B

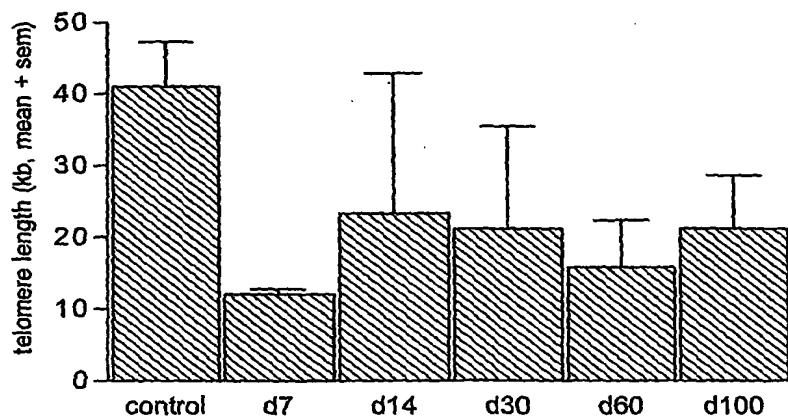


Figure 8 (see Appendix 4)

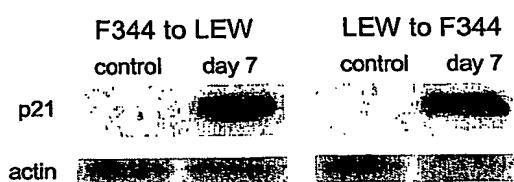
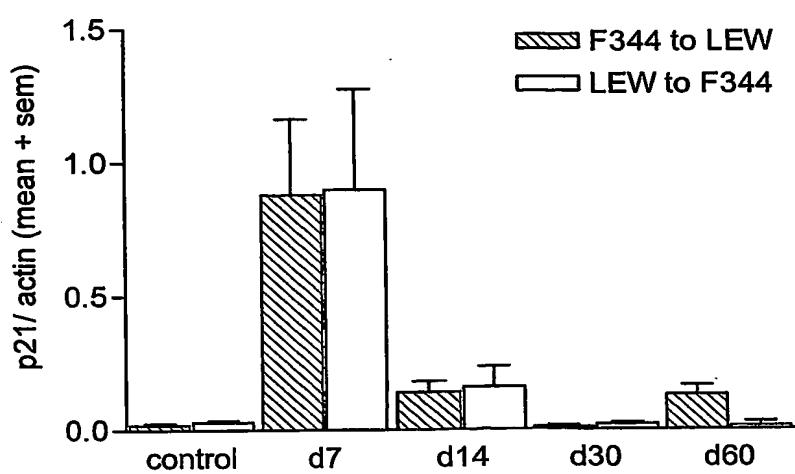
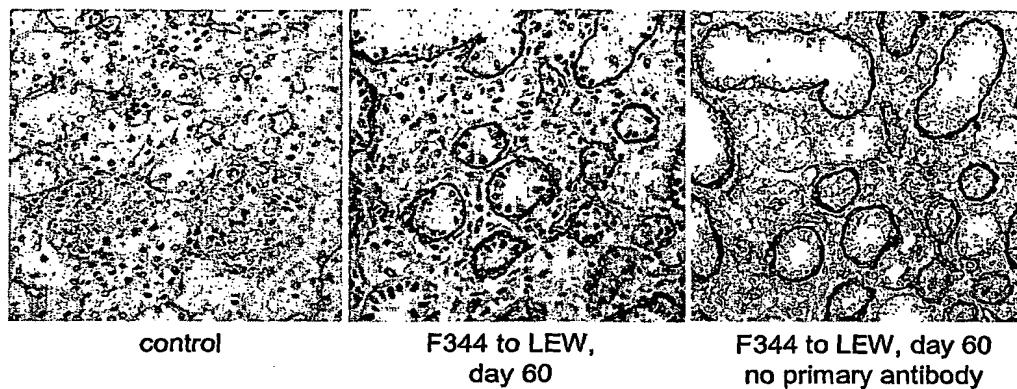
SA Joosten *et al***A****B**

Figure 9 (see Appendix 4)

SA Joosten *et al*

A



B

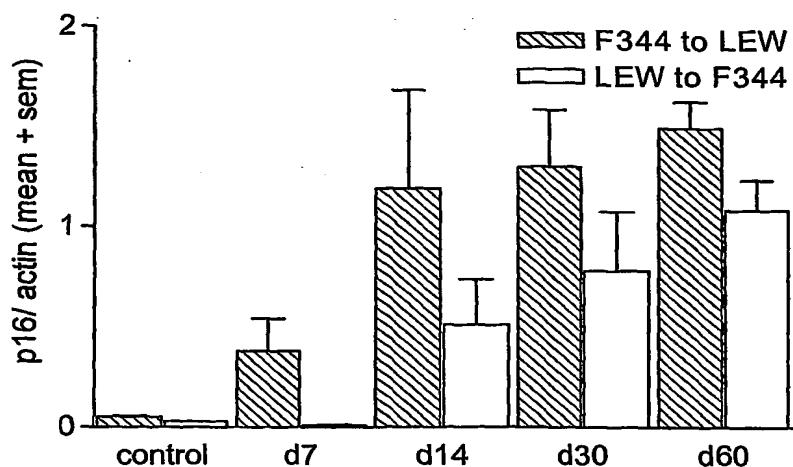
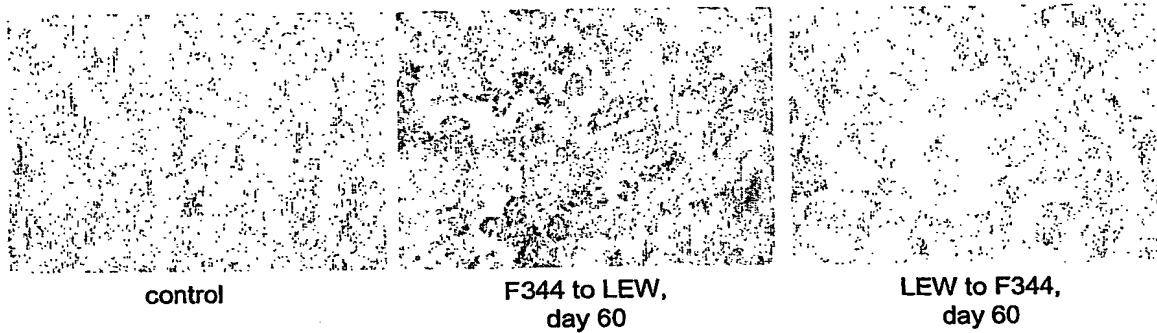


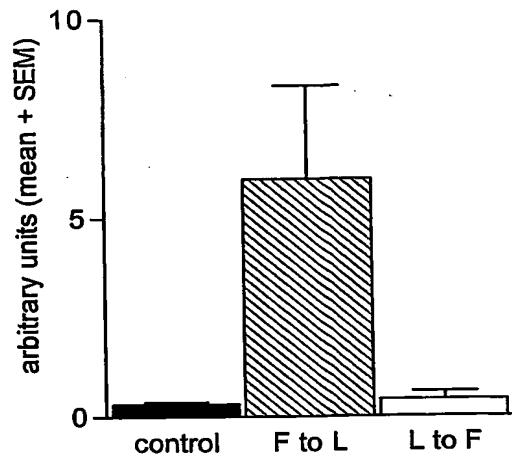
Figure 10 (see Appendix 4)

SA Joosten *et al*

A



B



C

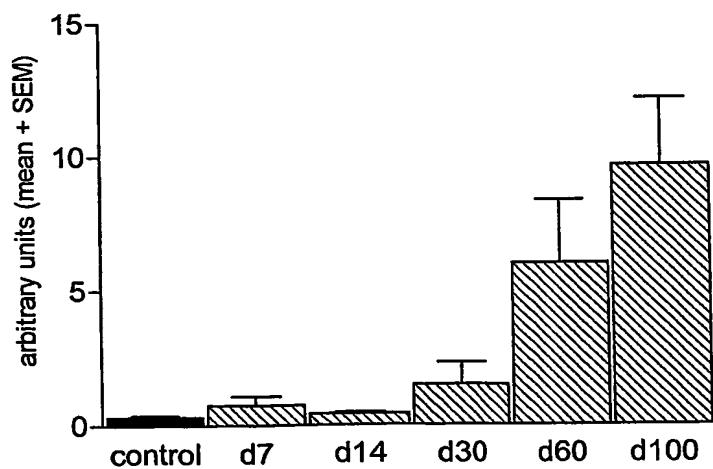
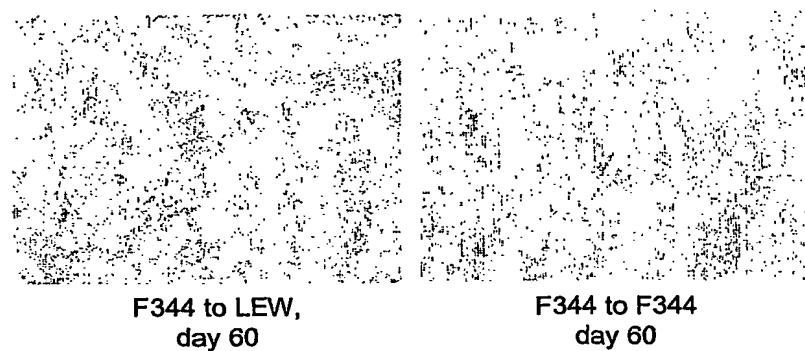


Figure 11 (see Appendix 4) SA Joosten et al

A



B

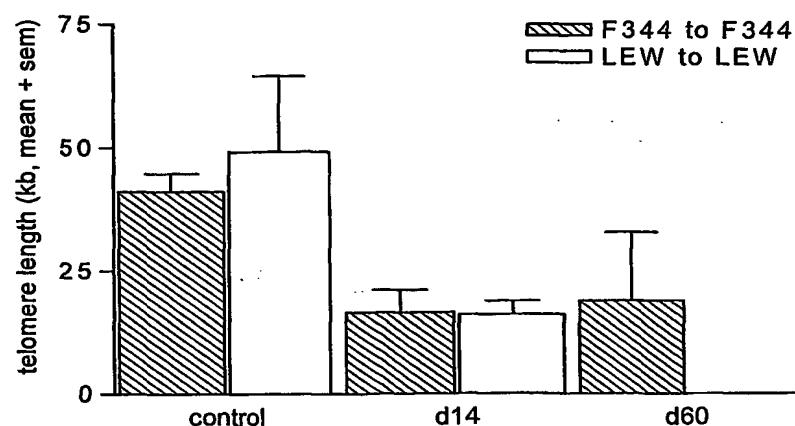


Figure 12 (see Appendix 4)

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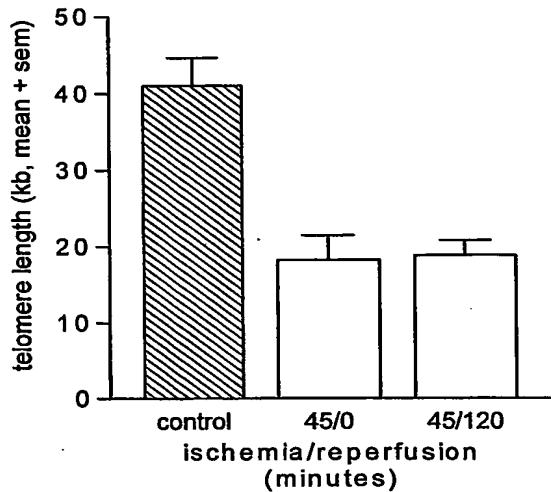
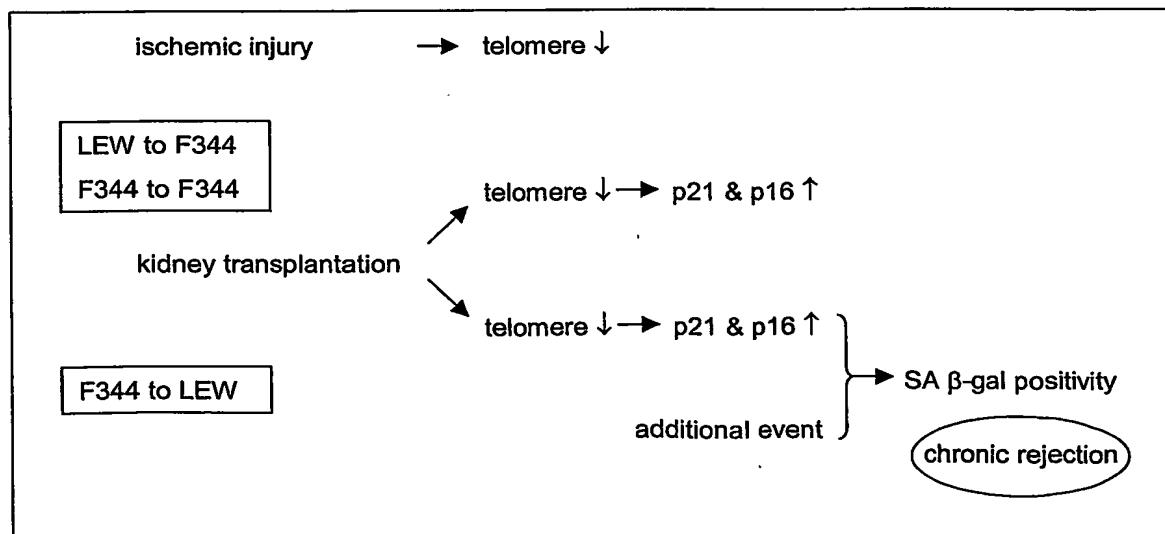


Figure 13 (see Appendix 4)

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